



Alaskan Way Viaduct and Seawall

An Urgent Need: A Time for Action

**The Alaskan Way Viaduct
(State Route 99) and the
Seawall are at risk...And so is
the region's economy**



An Urgent Problem

- The viaduct and seawall are old and seismically at risk
- A failure of either structure could cause failure of the other
- Gribbles (wood lice) have damaged the seawall structure
- Even something far less than a catastrophic failure could close the viaduct permanently
- **Inspections have revealed that the viaduct has moved.**



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Alaskan Way 1931

- Seawall built in stages 1915-1936
- Seawall and viaduct rest on fill

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The Structure Today

Potential Failure Points

Viaduct

Weak column-beam connection

Weak column-footing-pile connections

Column damage-2001

Column damage-2001

Insufficient capacity columns

Seawall

Soil liquefaction and foundation

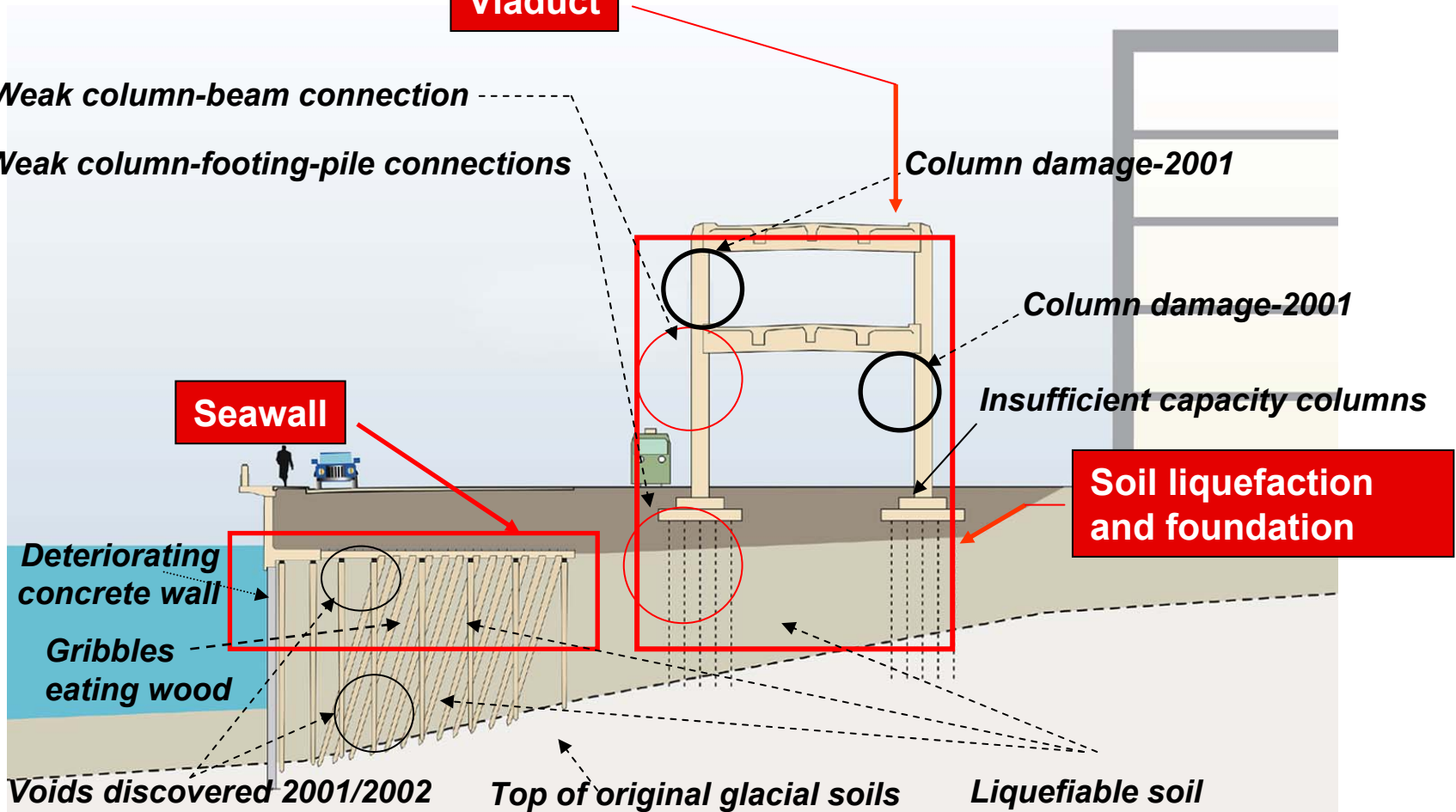
Deteriorating concrete wall

Gribbles eating wood

Voids discovered 2001/2002

Top of original glacial soils

Liquefiable soil





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**Gribbles are eating
the seawall's wooden
supports**





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**Bad Things
Do Happen
Kobe 1995**





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Effects of a Viaduct and Seawall Failure

- Total gridlock on streets adjacent to viaduct and enough traffic fills two freeway lanes in each direction on I-5
- Congestion on freeways and arterials through downtown Seattle jumps by nearly 40 percent.
- Workers face immediate, dramatic increase in traffic snarls
- Freight and rail disrupted



Effects of a Viaduct and Seawall Failure

- Ferry users lose direct service
- Businesses along waterfront disrupted
- Disruption or failure of:
 - Lights
 - Power
 - Telecommunications
 - Natural gas
 - Sewers
 - Water



Effects of a Viaduct and Seawall Failure

Economic growth slowed throughout the region

The Everett to Tacoma corridor is the economic heart of the state, accounting for:

- More than 50 percent of the jobs in Washington State
- More than 50 percent of the state retail tax
- More than 50 percent of the state gas tax





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Our Response



- State repaired major damage
- Emergency plan developed
- City and State moved fast to develop options



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Current Options

- 1. Rebuild/Retrofit**
- 2. Aerial**
- 3. Tunnel**
- 4. Surface**



Alaskan Way Viaduct and Seawall

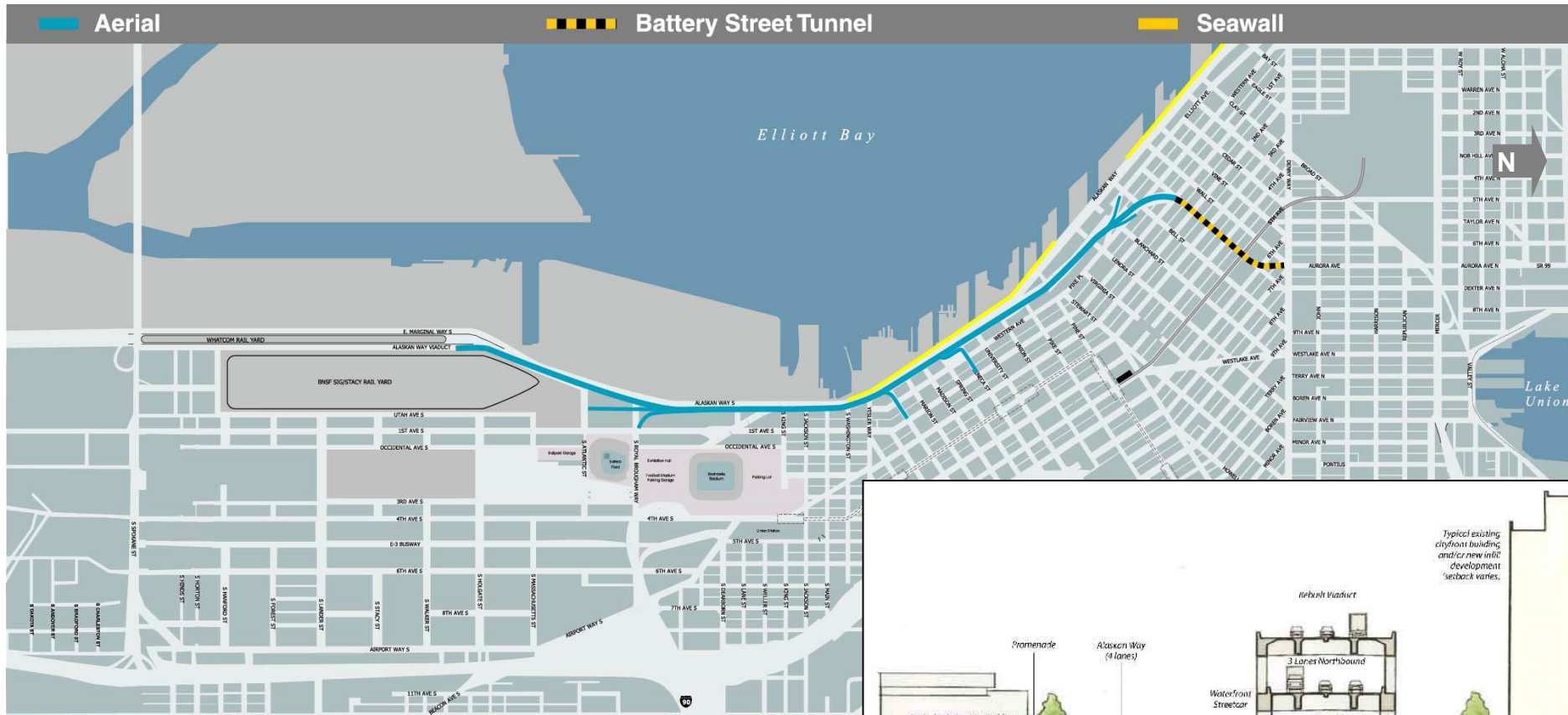
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Project size and costs reduced



- Focus on critical waterfront area
- Reuse Battery Street Tunnel (instead of building new tunnels under Belltown)
- No midtown ramps in some options (access shifted to other locations)
- No new Spokane Street interchange
- No improvements south of Holgate Street

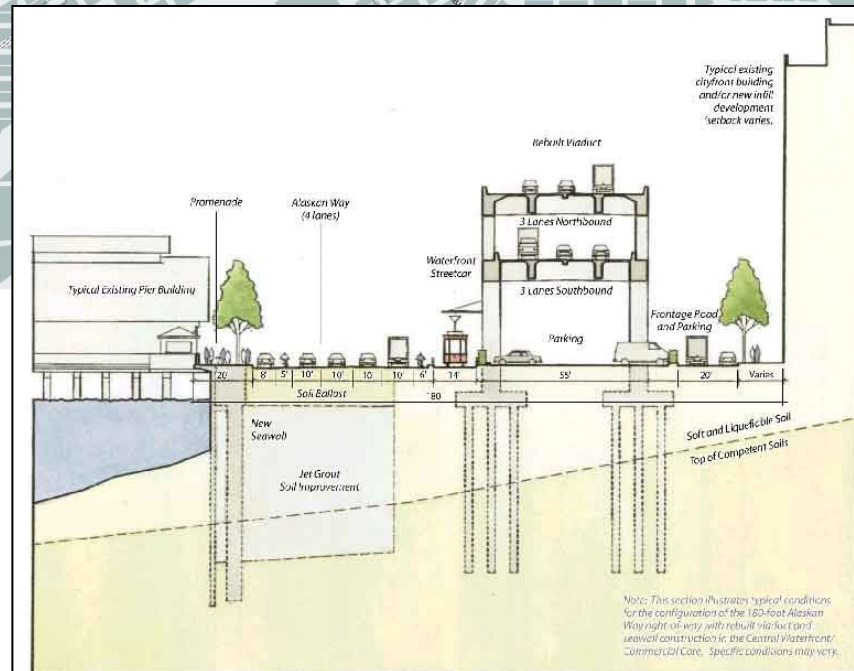
Rebuild Option



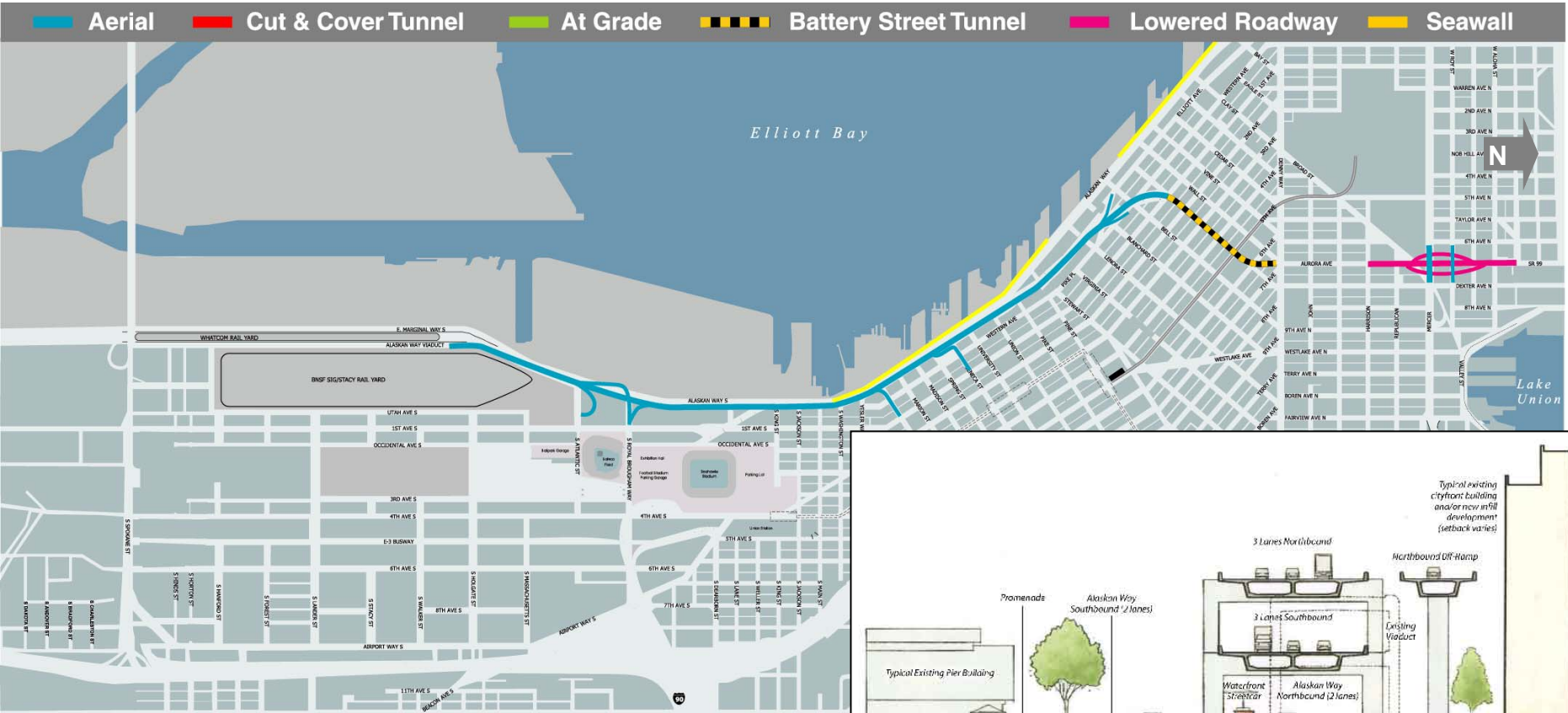
Cost Range
\$2.4 – \$2.9 billion

Construction Duration
8-9 years

Potential Cost Reductions
up to \$450 million +



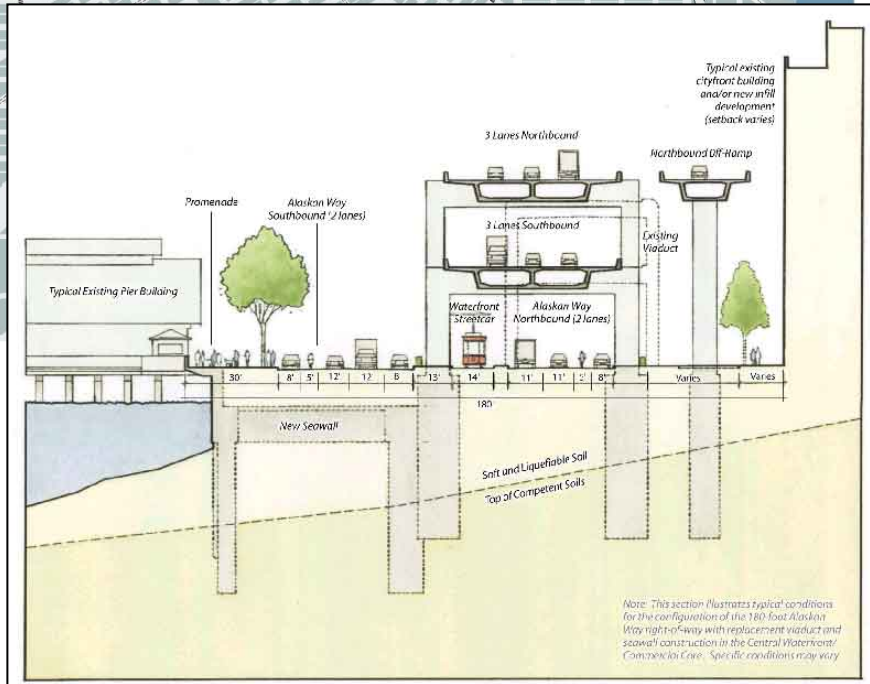
Aerial Option (wider than existing viaduct)



<p><u><i>Cost Range</i></u></p> <p>\$2.7 – \$3.3 billion</p>
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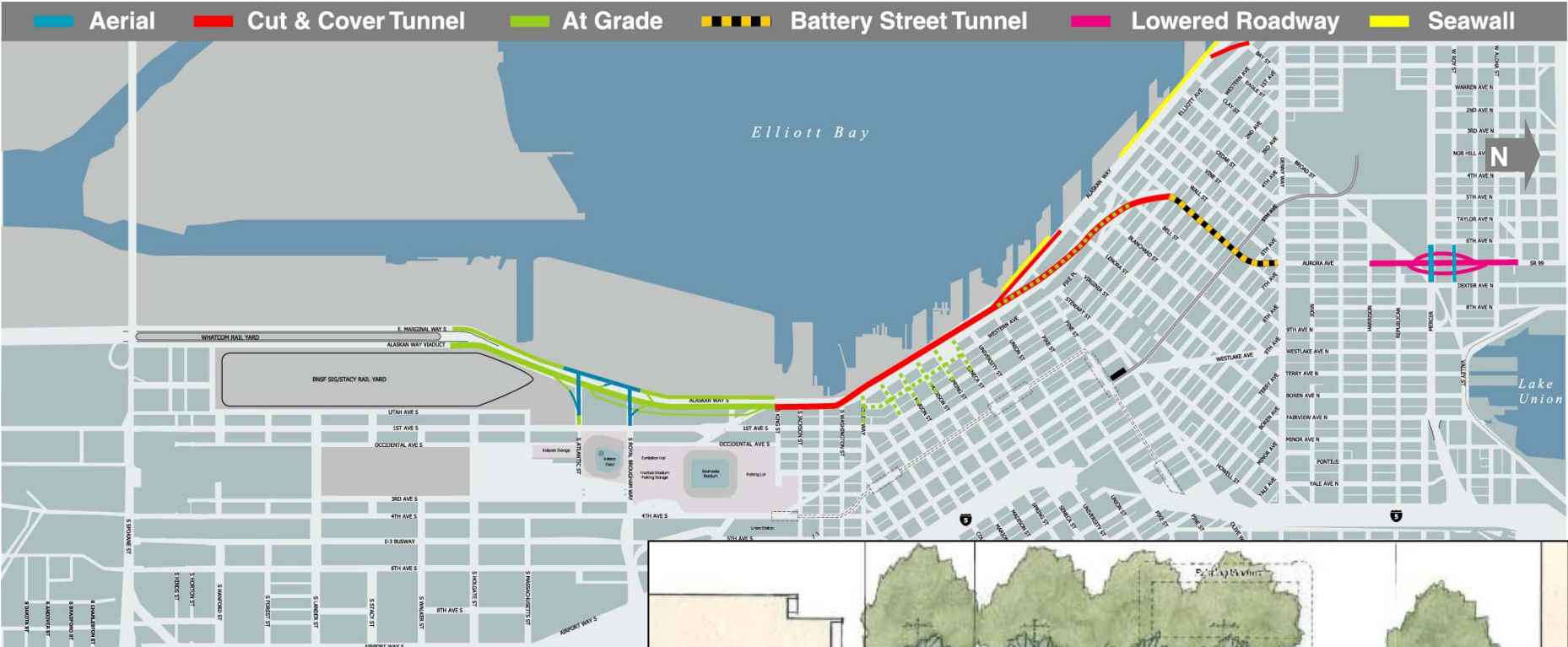
<p><u>Construction Duration</u></p> <p>6-8 years</p>
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<p><u>Potential Cost Reductions</u></p> <p>\$65 - \$675 million</p>



Note: This section illustrates typical conditions for the configuration of the 180-foot Alaskan Way right-of-way with replacement viaduct and seawall construction in the Central Waterfront/Commercial Core. Specific conditions may vary.

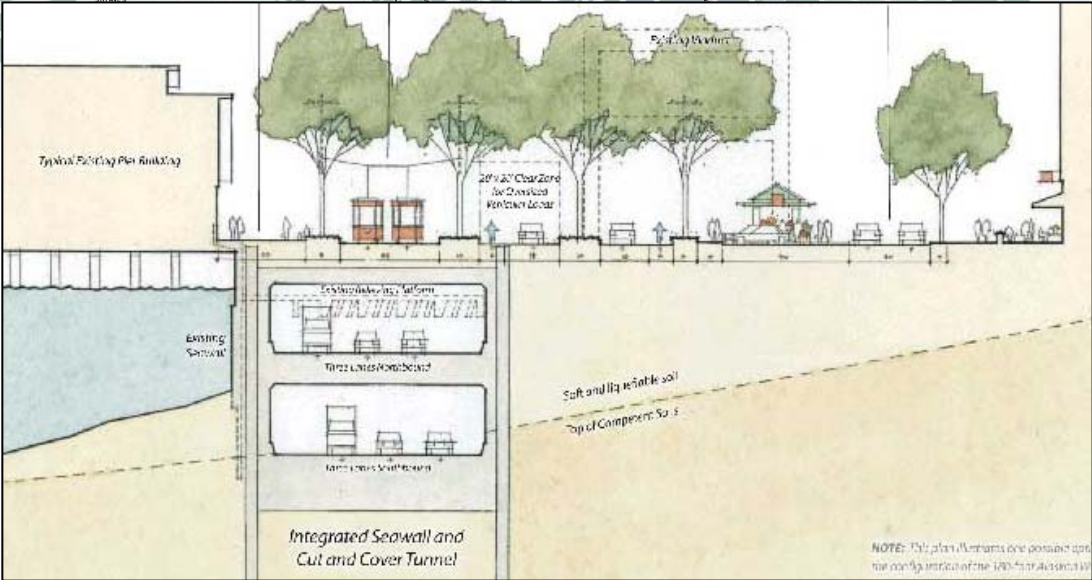
Tunnel Option



<p><u><i>Cost Range</i></u></p> <p>\$3.9 – \$4.7 billion</p>
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<p><u>Construction Duration</u></p> <p>7-9 years</p>
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<p><u>Potential Cost Reductions</u></p> <p>\$60 - \$1.7 billion</p>



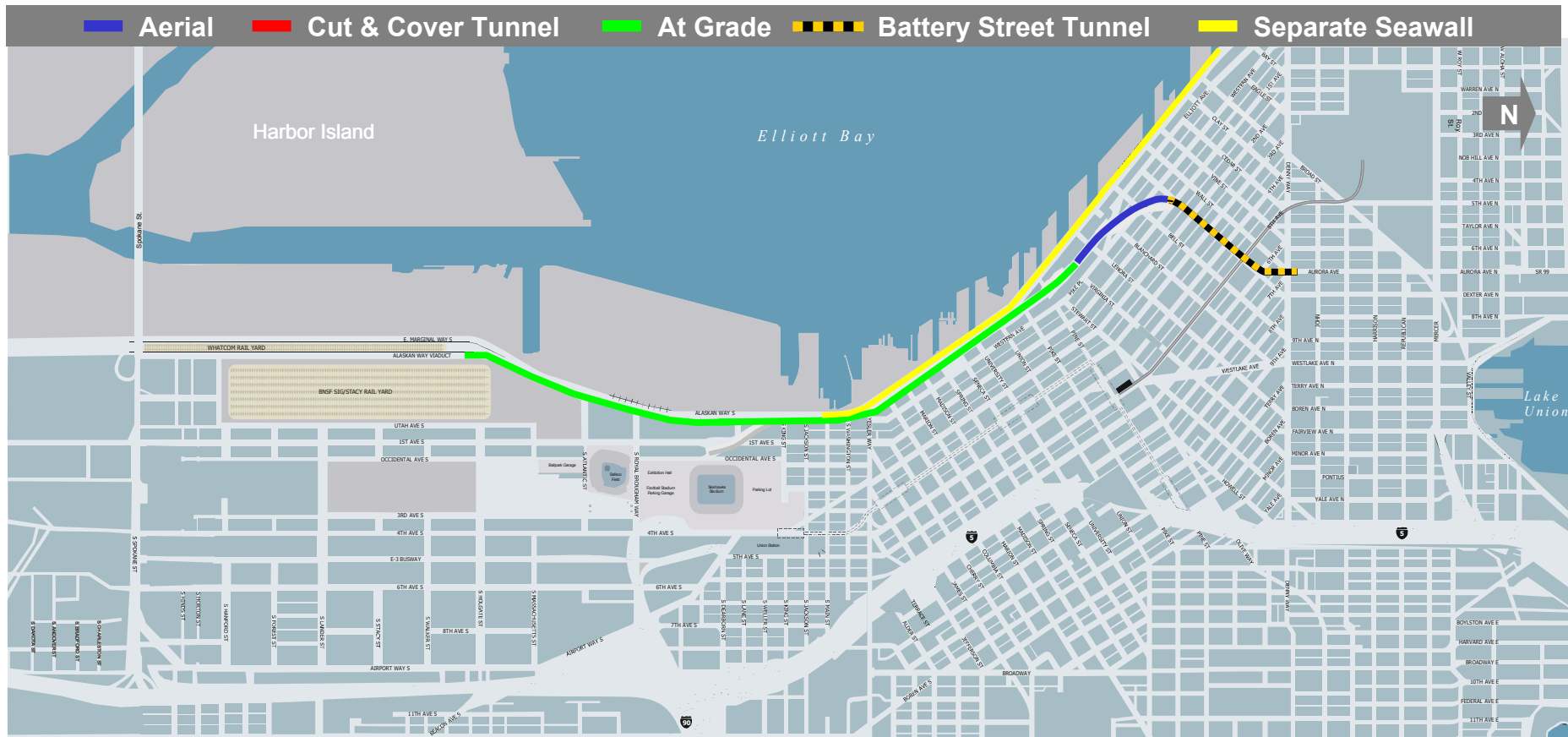
NOTE: The plan alternates are possible depending on the configuration of the 120-foot diameter VV.

- New concept under development
- Relies on surface facilities
 - Existing City streets
 - Reconfigured Alaskan Way surface street

Surface Option

Cost Range
TBD

Construction Duration
TBD





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We Can Begin to Fix the “Mercer Mess”



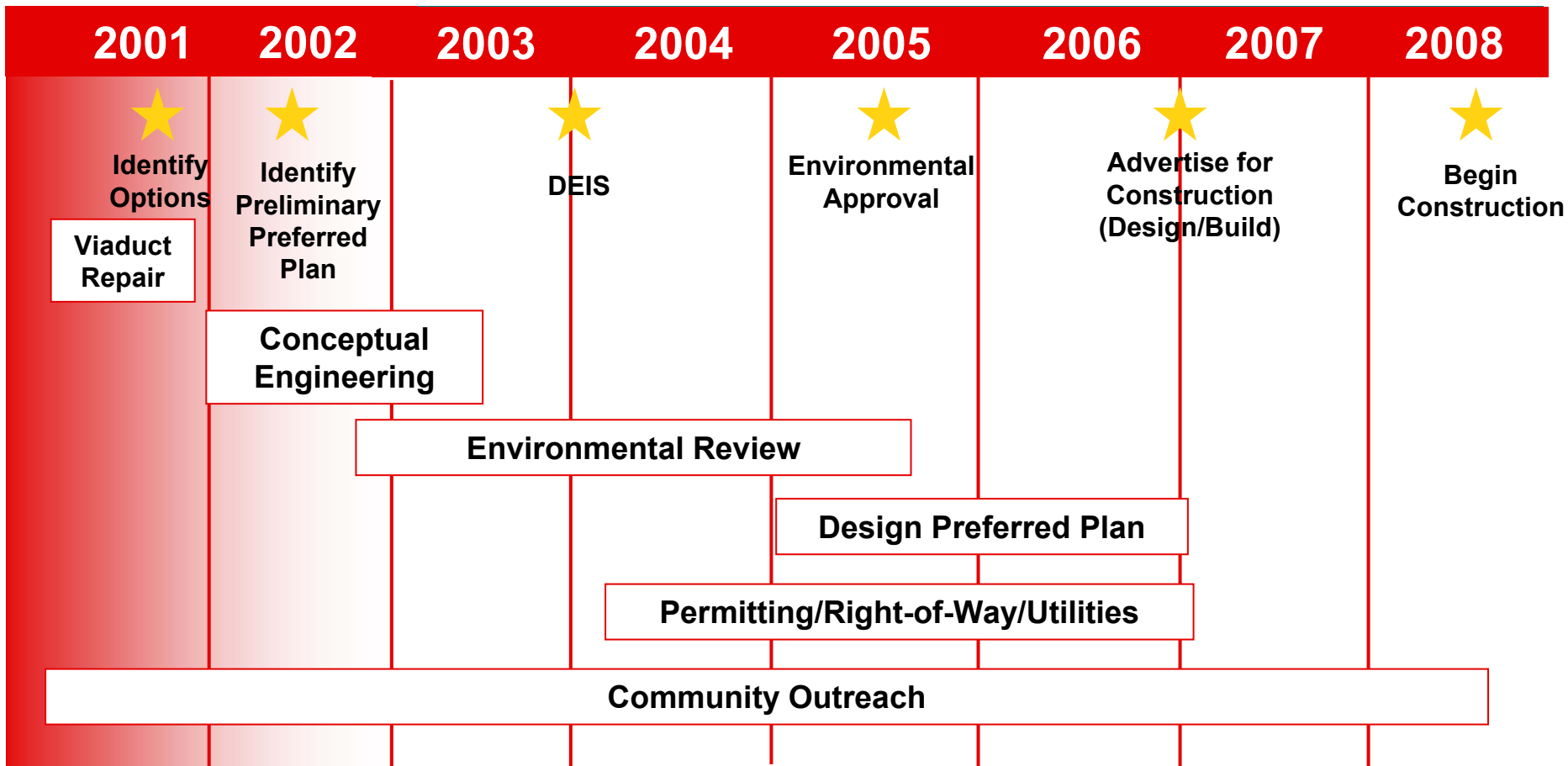
- Reconnects Mercer, Roy and other streets
- Removes barriers between Seattle Center and South Lake Union for pedestrians and vehicles



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Project Schedule*



*Subject to funding availability

Funding

- **Current Funding: \$1M State (remaining), \$5M City of Seattle**
 - Completes at-grade and retrofit analysis
 - Completes design plans and traffic analysis
 - Project shutdown: December 2003



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\$15 Million Needed in 2003-2005



What the Moneys Buys:

- Complete EIS
- Continue Engineering
- Select Design Plan
- “Green Light” for Project



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Let's move before the viaduct moves again





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For Information:

Project Hotline: 206-269-4421

Project Website:

www.wsdot.wa.gov/projects/viaduct

E-mail: viaduct@wsdot.wa.gov

Mayor's Website:

www.seattle.gov/mayor/viaduct